

ABSTRACT

Background and Objectives:

Acute appendicitis is still one of the commonest surgical emergencies. The diagnosis is primarily clinical based on the typical presentation of right lower quadrant pain, nausea and vomiting with tenderness and guarding in right iliac fossa. The clinical experience of the surgeon decides the accuracy of the diagnosis which is difficult in 30 – 40% of cases despite available diagnostic modalities. Apart from a careful history and clinical examination, blood inflammatory markers also help in the diagnosis and management of acute appendicitis. Various inflammatory markers have been estimated like white cell count, C Reactive Protein and polymorph percentage. This study is conducted to estimate the role of sensitivity and specificity of total white cell count and C Reactive Protein in patients clinically diagnosed as suffering from acute appendicitis and their correlation with histopathology reports to assess their role in diagnosing complicated acute appendicitis.

Methods:

Patients admitted with clinical diagnosis of acute appendicitis to department of general surgery, Thanjavur Medical College & Hospital, Thanjavur, were included in the study. Clinical examination was made and the signs and symptoms were recorded in the proforma. Patients presenting with

appendicular mass or abscess, treated conservatively and patients who refused to give consent were excluded from this study. Blood samples were collected on admission before surgery for estimation of total WBC count and CRP estimation. Then the patients underwent appendicectomy and the resected appendicular specimens were sent for histopathological examination and the results were collected. Based on the histopathological report the cases were grouped under two categories complicated acute appendicitis and uncomplicated acute appendicitis depending on the presence or absence of perforation and gangrenous changes. Then the data were entered into excel 2007 and statistical analysis were made to find the significance of total white cell count and C reactive protein values in diagnosing acute appendicitis and their correlation with complication like perforation or gangrenous changes.

Results:

The total number of study subjects participated was 150 cases and among them 43 cases were complicated acute appendicitis and 107 cases were uncomplicated acute appendicitis. The age distribution was 71 cases (46.5%) were less than 25 years and 79 cases (53.5%) were 25 years and above. Out of the 150 cases 106 (70.7%) were males and 44 (29.3%) were females making a ratio of 2.4: 1. Right iliac fossa pain and tenderness and Mc Burney's tenderness were present in all 150 cases (100%) while migratory pain was noticed only in 76 cases (50.7%). Guarding and rigidity were seen in 67 cases

(44.7%). C reactive protein was positive in 119 cases (79.3%) and negative in 31 cases (20.7%). In complicated acute appendicitis C reactive protein values were > 25 mg/dl in 40 cases (93%) and only in 35 cases (32.7%) in uncomplicated acute appendicitis group. Total white cell count was >11150 cells/cmm in 33 cases (76.7%) in complicated acute appendicitis and in uncomplicated acute appendicitis 47 cases (43.9%) only and making a total of 80 cases (53.3%).

Interpretation and conclusion:

In the present study pre operative blood inflammatory marker C reactive protein was positive in significant number of cases and was markedly raised in complicated acute appendicitis. Total white cell count was significantly raised more in complicated acute appendicitis cases and to a lesser extent in uncomplicated acute appendicitis cases. Raised C reactive protein value is a good marker of acute appendicitis and a high C reactive protein value is a better indicator of complicated acute appendicitis. Pre operative C reactive protein estimation in cases of acute appendicitis helps in diagnosis as well as in grading the severity of acute appendicitis.